



INTERNATIONAL JOURNAL OF PURE AND APPLIED RESEARCH IN ENGINEERING AND TECHNOLOGY

A PATH FOR HORIZING YOUR INNOVATIVE WORK



SPECIAL ISSUE FOR NATIONAL LEVEL CONFERENCE "Recent Trends and Development in Civil Engineering"

RE-URBANIZATION AND IMPROVEMENT STUDY FOR PRATAPPURA VILLAGE JIGISHA SINDHAV¹, DHAVAL M PATEL², ABHIJITSINH PARMAR², DHRUV PATEL¹, BHARGAVI PATEL¹

1. U.G. Student, Dept. of Civil Engineering, SVBIT, Gandhinagar, Gujarat – 382021
2. Asst. Prof., Dept. of Civil Engineering, SVBIT, Gandhinagar, Gujarat – 382021

Accepted Date: 27/01/2018; Published Date: 01/03/2018

Abstract: By using this research, we will try to improve rural area by providing various amenities. The main goal of project is to provide sustainable structure for the village. We have to provide basic amenities like water supply, electric supply, and sustainable shade for live. Have to provide rode network and the drainage network as well. The aim of the project is to decrease the urbanization and maximize the Reurbanization. We describe the ecosystem for a village and then map out an integrated design procedure for building an Ideal Village. We define an Ideal Village as a bundle of services which are delivered to its residents and businesses in an effective and efficient manner. For this our study area is Pratappura (Balva) village, which is located in Kalol taluka in Gandhinagar District of Gujarat. This village located about 20 km from the state capital, Gandhinagar. The coordinate of village is 23°21'58.26"N 72°38'21.91"E. Based on survey we have suggested location of bio gas plant with design for solid waste management of Pratappura village.

Keywords: Reurbanization, Sustainable Structure, Physical & Social Infrastructure, Drainage Facility, Animal Husbandry.



PAPER-QR CODE

Corresponding Author: JIGISHA SINDHAV

Access Online On:

www.ijpret.com

How to Cite This Article:

Jigisha Sindhav, IJPRET, 2018; Volume 6 (7): 115-123

INTRODUCTION

Urban: It is the area in which there are dense population and dense developments of infrastructure and there is good transportation facility, drainage facility, and sustainable infrastructure and also water-supplying facilities are available.

Rural: In this area population density is low and there are mostly public are engaged with agriculture and animal husbandry. It is not well transportation road, drainage line, and water supplying system.

The research paper is mainly based on a development of village. The development is done on an infrastructure facility and social development. The main goal of research is to provide sustainable structure for the village, and to provide urban facilities in rural areas while maintain the rural soul. This will help for developing village in sustainable manner; reduce migration from village and re-migration of family from city to village. We will give planning proposal of Physical Infrastructure, Social Infrastructure, sustainable infrastructure and Socio-Cultural Infrastructure facilities with method of giving Redesigning, Reimaging, Repair & maintenance, and Sustainable planning for basic need of village like Recreational Garden and Playground, Biogas plant. We gave best planning proposal and best economic & sustainable solution for serving society directly or indirectly for nation with this research. Our study area is PRATAPPURA (BALVA) village located in Kalol taluka in Gandhinagar District of Gujarat.

PROBLEM STATEMENT

- In this village there is no any agricultural co-operative society.
- Absence of Recreation centre is also one of the major problems for people.
- Public garden and park is also not available.

OBJECTIVES

- Provide easier, faster, low cost access to marketable commodities produced in such a village.
- Prevent the migration from rural area to urban areas due to lack of opportunity and facility.
- Make the model village hub which attracts the resource the development of other village.
- Create the sustainable facility to village.
- Contribute toward urbanization and social empowerment.
- Using renewable energy.
- Maximum land use in agriculture.
- Providing 24×7 hours electricity.

RESEARCH METHODOLOGY

Invisit of Pratappura village some basic information and essential data were collected by us. Some photographs were also taken. Then we will try to identify the problem and give appropriate solution regarding it. Social, socio-economical, physical information and data were

collected. Based on collected data GAP analysis was carried out to know the deficiencies in existing infrastructure. Based on the infrastructural deficiencies the suggestions and recommendations were done.

STUDY AREA:

Pratappura (Balva) is a village located in Kalol taluka in Gandhinagar District of Gujarat. This village located about 20 km from the state capital, Gandhinagar. The coordinate of village is 23°21'58.26"N 72°38'21.91"E. Gandhinagar, Balva and Mansa are nearest place from the Pratappura (Balva) village. The village approach road is good. The village is clean and there is no garbage on the street. They use the solar street light so it is good for village and environment. The villagers are celebrating festival together.



Figure 1: Map of Pratappura (Balva) village(source : Google image)

DATA COLLECTION:

- The general data is collect by the observation of village.
- By visiting village.
- By questioning to villagers.
- By taking photograph of existing situation.



(a) RO plant

(b) Water storage and cooler tank

(c) Bus stand



(d) Toilet in school

(e) Garbage dump

(f) Playground

Figure 2 (a, b, c, d, e, f) – Current scenario of Pratappura Village

Table – 1 Village data base and ongoing projects

Village Base Map Available: Hard Copy/Soft Copy	Not available at gram panchayat
Recent Projects going on for Development of Village	Swachh Bharat Abhiyan
Any NGO working for village development	No

DATA ANALYSIS(GAP ANALYSIS):

Table – 2 facilities available in Village

Facilities	Planning Commission/UDPI Norms	Village Name: Pratappura (Balva)			
		Population:	555		
		Existing	Required	as Gap	
				per Norms	
Social Infrastructure Facilities					
Education					
Anganwadi	Each or Per 2500 population	1	1		0
Primary School	Each Per 2500 population	1	1		0
Secondary School	Per 7,500 population	0	0		0
Higher Secondary School	Per 15,000 Population	0	0		0
College	Per 125,000 Population	0	0		0
Tech. Training Institute	Per 100000 Population	0	0		0
Agriculture Research Centre	Per 100000 Population	0	0		0
Health Facility					
Govt/Panchyat Dispensary or Sub PHC or Health Centre	Each Village	0	1		-1
PHC & CHC	Per 20,000 population	0	0		0
Child Welfare and Maternity Home	Per 10,000 population	0	0		0
Hospital	Per 100000 Population	0	0		0
Public Latrines	1 for 50 families (if toilet is not there in home, specially for slum pockets & kutcha house)	0	1		-1
Physical Infrastructure Facilities					
Transportation			Adequate	Inadequate	

Pucca Approach Road	Village	Each village	Adequate	
Bus/Auto provision	Stand	All Villages connected by PT (ST Bus or Auto)	1	1
Drinking Water (Minimum 70 lpcd)			Adequate	Inadequate
Over Head Tank	1/3 of Total Demand		Adequate	
U/G Sump	2/3 of Total Demand		Adequate	
Drainage Network			Adequate	Inadequate
Open Cover			Adequate	
Waste Management System			Adequate	Inadequate
Electricity Network			Adequate	Inadequate
Socio- Cultural Infrastructure Facilities				
Community Hall	Per 10000 Population		0	0
community hall cum Public Library	Per 15000 Population		0	0
Cremation Ground	Per 20,000 population		0	0
Post Office	Per 10,000 population		0	0
Gram Panchayat Building	Each individual/group panchayat		1	1
APMC	Per 100000 Population		0	0
Fire Station	Per 100000 Population		0	0
Public Garden	Per village		0	1
Police post	Per 40,000Population		0	0
			ESR cap	7400
			Sump cap	14800
			Lat	2.775

RESULT AND DISCUSSION

We performed the tacheo-economic survey of the Pratappura village and found out the certain problems like lacking of bio gas plant and garden. Most of the villagers are dependent upon animal husbandry for the survival. due to which a lot of dung waste is produced in the village but as there is no proper bio gas plant people have to face the problem of unhygienic and unhealthy surrounding so we suggested the probable design of bio gas plant for the village.

people uses chulas for cooking purpose which is producing large amount of carbon dioxide content that is harmful for environment. For the reduction of CO₂ content and increases natural atmosphere garden should required. So we suggest design of garden.

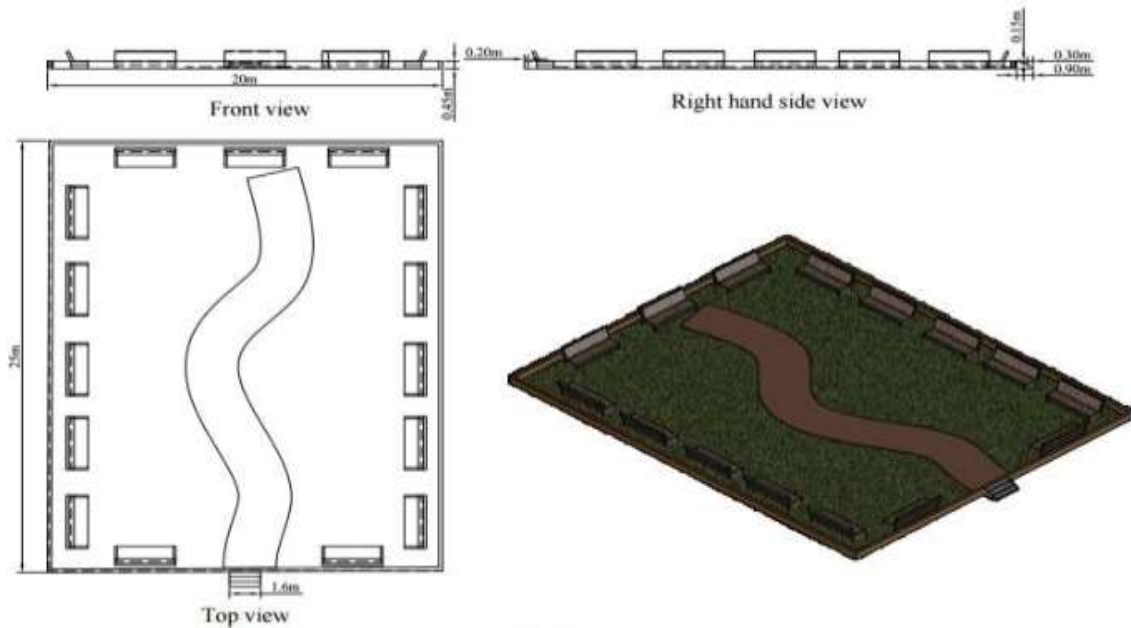


Figure 3: Garden Design

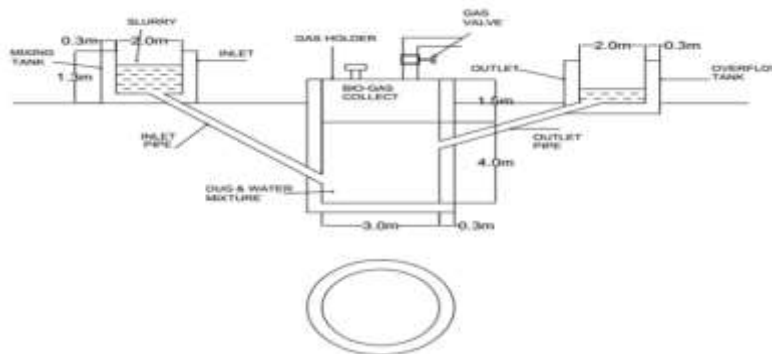


Figure 4: Proposed Design of Bio gas Plant

CONCLUSION:

From this research, we have concluded that what is basic need of village and what are amenities and prior requirement to make any village as an ideal village. We can also determine that what is the process needs to be done such all this work, role of villagers, Sarpanch, Local authorities, Talati, TDO, DDO for development of village and also basic and main thing is supporting to all will make sustainable design and facilities for village develops as ideal village.

Hence, we can conclude that if we want to change our society and nation then first develop village area.

we have to give all necessity amenities that they can live better life as well as they can utilize all facilities as economical as possible also villagers can develop their self as compare to urban area.

REFERENCES

1. ALLEN, C., BLANDY S. (2004): The future of city centre living: implications for urban policy. Centre for Regional Economic and Social Research, Sheffield Hallam University
2. ATKINSON, R. (2003): Introduction: misunderstood saviour or vengeful wrecker? The many meanings and problems of gentrification. *Urban Studies*, 40(12): 2343–2350
3. BIJAK, J., KUPISZEWSKA, D., KUPISZEWSKI, M. (2008): Replacement migration revisited: Simulations of the effects of selected population and labour market strategies for the aging Europe, 2002–2052. *Population Research and Policy Review*, 27(3): 321–342.
4. CASSIERS, T., KESTELOOT, C. (2012): Socio-spatial inequalities and social cohesion in European cities. *Urban Studies*, 49(9): 1909–1924
5. DANDOLOVA, I. (2003): Deurbanisation in Bulgaria: Challenges of transition and sustainable development. In: Eckardt, F., Hassenpflug, D. [eds.]: *Consumption and the post-industrial city* (pp. 127–140). Frankfurt/Main, Peter Lang.
6. HAASE, A., RINK, D. (2015): Inner-city transformation between reurbanisation and gentrification: Leipzig, eastern Germany. *Geografie*, 120(2): 226–250.
7. Dhaval M Patel, V M Patel, Abhijitsinh Parmar, Tsunami Evacuation System For Western Coast Of Gujarat In Porbandar City, ISER, 11th International Conference, New York, USA, 5th June 2015, ISBN: 978-93-85832-49-9. 15-19.
8. Dhaval M Patel, Abhijitsinh Parmar, Avadhkumar Radadiya, Mihirkumar Sheladia, Smit Sardhara, Tsunami Evacuation System For Western Coast Of Gujarat In Mandvi City, International Conference, Dubai 1st and 2nd January, 2017, Published In International Journal Of Management And Applied Science, 2017, 23-27.
9. Dhaval M Patel, Kushal Shah, Patel Yagnik, Radadiya Avadh, Smit Sardhara, Literature Review On Tsunami Evacuation System On Coast Of Diu, International Journal For Innovative Research In Science & Technology, 2017, 108-114
10. Dhaval M. Patel, V.M. Patel, Abhijitsinh Parmar, Bhupesh Katariya, Gautam Dadhich, Tsunami Evacuation System For Western Coast Of Gujarat In Okha City, International Conference On Multidisciplinary Research & Practice, Icmrp-2014, 411-414
11. Abhijitsinh Parmar, Dhaval Patel, Dron Chaudhary., Utilization Of Pond Fly Ash As A Partial Replacement In Fine Aggregate With Using Fine Fly Ash And Alccofine In HSC-Hards Concrete Properties, Issue 3 | Dec 2014, 74-77.
12. Abhijitsinh Parmar, Dhaval Patel, Experimental Study On High Performance Concrete By Using Alccofine And Fly Ash - Fresh Concrete Properties, International Journal Of Pure And Applied Research In Engineering And Technology, 2014, 43-51.

13. Abhijitsinh Parmar, Dhaval M Patel,. Experimental Study On High Performance Concrete By Using Alccofine And Fly Ash - Hard Concrete Properties, International Journal Of Engineering Research & Technology, 2013, 3363-3366.

Website

1. <http://ciiblog.in/new/wpcontent/uploads/freshizer>
2. http://whc.unesco.org/uploads/thumbs/site_1349_0002-750-0-20100730101627.jpg
3. http://wiienviis.nic.in/WriteReadData/UserFiles/image/PAs_Map_Database/images/India-Map.jpg, <https://www.indianholiday.com/pictures/travelguide/other-images/map-80.jpeg>,
<https://www.google.co.in/maps/place/Dantali,+Gujarat>
4. <https://www.sswm.info>, <https://i0.wp.com/www.thewatertreatments.com>
5. vishwakarma yojana